



ENERGY STAR® Update for the AH&LA Engineering & Environment Committee

April 29, 2009

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U.S. Environmental Protection Agency**



Learn more at energystar.gov

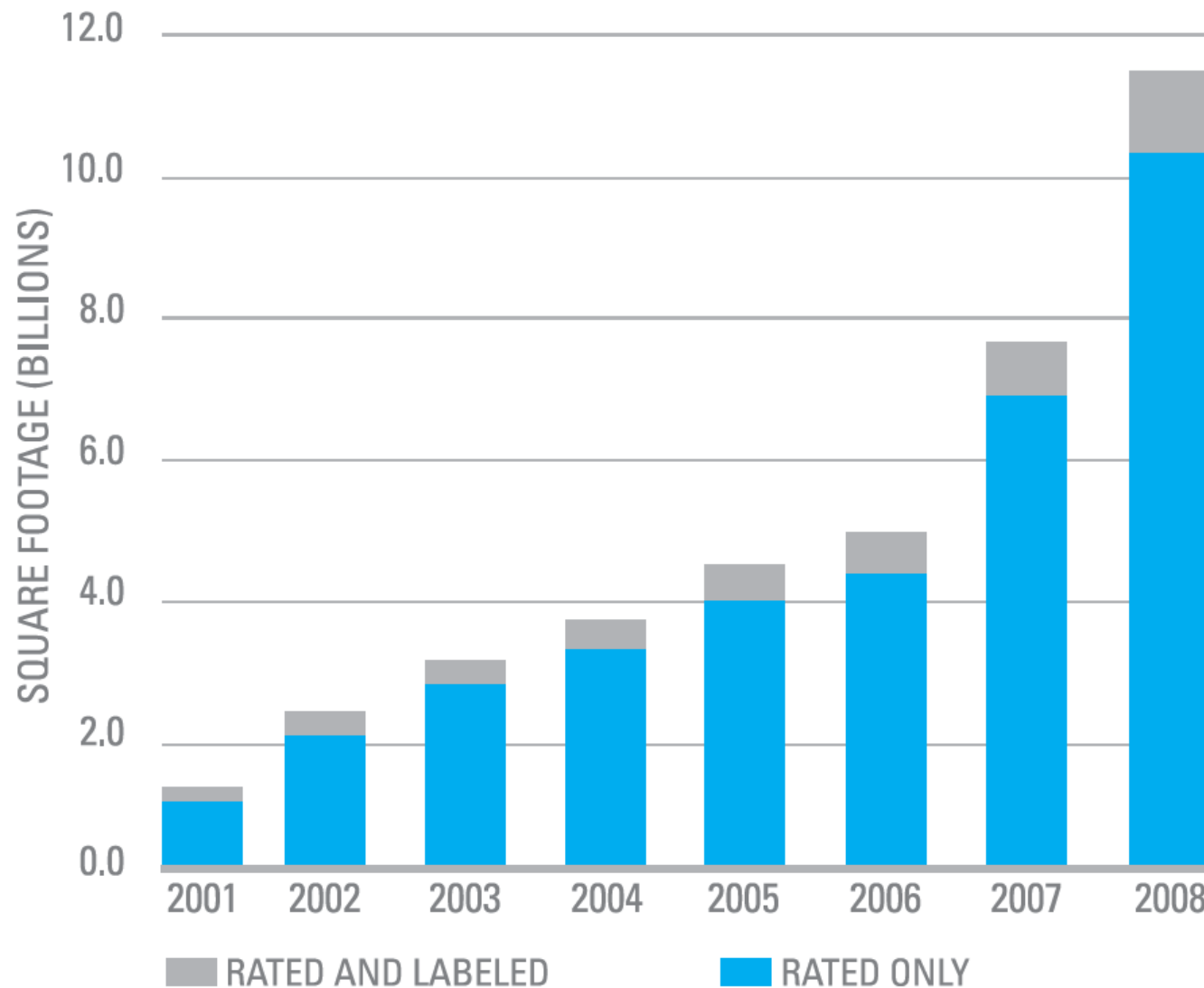


Agenda



- Recent ENERGY STAR Success
- Energy Policies leveraging ENERGY STAR
- Upcoming Trainings
- Portfolio Manager Updates
- Questions & Answers

Building Rating Activity Increasing Rapidly




Hotel Benchmarks



- 18% of total square footage of lodging industry is benchmarking
- Almost 4,000 hotels benchmarking
- Over 400 labeled hotels

2008: Eco.orbitz.com Web site





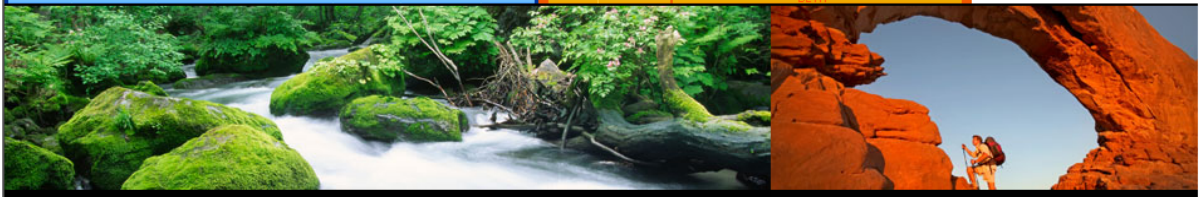
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ECO-TOURISM

[Overview](#) [Key Destinations](#)


Introduction to Eco-Tourism



Orbitz is committed to protecting Planet Earth, by helping raise environmental awareness and by making it easier to be an eco-friendly traveler.

- Find [Hotels](#) that have earned the EPA's ENERGY STAR® for using nearly 40 percent less energy than average buildings and emitting 35 percent less carbon dioxide into the atmosphere.
- Reserve a [hybrid rental car](#).
- Offset flight-related carbon emissions through our partner Carbonfund.org.
- Find out what you can do to [save the oceans](#) with oceana.org.
- [Volunteer](#) to help clean one of America's national parks.

So think green when you plan your next trip, and make every day of your journey an Earth Day.



NEW! HYBRID RENTALS
Go Green, Save Green [▶](#)

Eco-Friendly Hotels

Start considering an eco-friendly hotel when you travel. Many lodging properties use wind and solar power as energy sources or purchase only environmentally-friendly products, such as "green" detergents for linens and soaps. Hotels around the world are doing their part to help you minimize your impact on the environment on your next trip. Based on [Orbitz' research](#), we think these hotels deserve some recognition.

Check out our growing list of "green" hotels:


Find hotels by state [Eco-Friendly Hotels Criteria](#)

[Bridgewater Marriott- Bridgewater, NJ](#) ●● [Hamilton Park Hotel- Florham Park, NJ](#) ●●

[Newark Liberty International Airport Marriott- Newark, NJ](#) ●●

Eco-Friendly Hotel Criteria:

- Use a natural source of energy (i.e. wind, water, solar, bio-fuel)
- Use environmentally-friendly and safe products (i.e. detergents for linens, soaps, shampoos, etc.)
- Contribute \$\$ from each hotel reservation to an environmental organization
- Use of energy conserving devices (i.e. eco-friendly light fixtures/bulbs triggered by motion detectors, water-saving devices, water filtration systems and air filtration/purifiers)
- Earned the ENERGY STAR®



Orbitz is proud to recognize hotels that have earned the ENERGY STAR, indicating that they are among the top 25% of facilities in the country for energy performance. Click here for more information about the ENERGY STAR program [www.energystar.gov](#).

Hotels interested in learning how to track energy performance and the related carbon emissions should visit ENERGY STAR's easy-to-use Portfolio Manager tool at <https://www.energystar.gov/istar/pmpam/>.



2009: Travelocity Green Directory



The Travelocity logo, featuring a stylized star and the word "travelocity" in a lowercase sans-serif font.

Customer Care | My Stuff

Home Flights Hotels Cars/Rail Vacation Packages Cruises Last Minute Packages Deals Activities

Travel Info Center Flight Status Destination Guides Travelocity Business About Travelocity

A collage of five nature-themed images: a thatched hut, a winding road through a forest, a close-up of a daisy, a tree with autumn leaves, and a lake with mountains in the background.

The Green Directory - Travel Responsibly

Exploring the corners of the earth and embracing other cultures can enrich lives and inspire healthy change, but being aware of and taking steps to reduce the environmental impact of our journeys are equally important. With our Green Directory we hope to connect travelers to options that will help to diminish the footprint their trips leave on the planet by featuring environmentally-friendly hotels and destinations, as well as offering our customers tips on responsible travel, eco-travel based reviews from fellow travelers, and the opportunity to negate your trip's footprint through carbon offsets.

Hotels

A photograph of a hotel room with a bed, a desk, and a window.

Hotel Terra

At Hotel Terra Jackson Hole, every decision is weighed with considerations of sustaining the environment while maintaining a luxurious experience for its guests.

[Read More](#)

Partners

A photograph of a hotel building with a garden and outdoor seating.

Kimpton

Environmental responsibility is a long-term commitment at Kimpton. Every three months, new products and practices are introduced to further reduce their impact on the planet. Sleep easy when you choose Kimpton boutique hotels.

[Read More](#)

Featured Green Properties

- USA
 - East Coast
 - Midwest/South
 - West Coast
- Asia Pacific
 - Canada
 - Europe
 - Mexico/Caribbean/Latin America/South America

[How did we establish this list?](#)

Boston, MA

[The Onyx Hotel - a Kimpton Hotel](#)

[Nine Zero Hotel - a Kimpton Hotel](#)

[Fairmont Copley Plaza](#)

[The Colonnade Hotel](#)

[The Lenox Hotel](#)

[Sheraton Boston Hotel](#)

[Hyatt Regency](#)

[Hyatt Harborside](#)

[Doubletree Boston Downtown](#)

[DoubleTree Guest Suites Boston](#)

[Comfort Inn & Suites Boston/Airport](#)

Bretton Woods, NH



New Partners 2008-2009!



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RESOURCES

SHARE YOUR IDEAS

RESOURCES



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Eco Facts on Why You Should Act

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Carbon Calculator

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Tips to Go Green in Your Office

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Partnership Programs



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Resources.](#)



- [U.S. Environmental Protection
Agency \(EPA\)](#)



- [U.S. Green Building Council
\(USGBC\)](#)



- [American Hotel & Lodging
Association](#)



EcoConsumer

Lifestyles of Health and Sustainability

Encyclopedia of Green Terms

Look up topics such as Renewable

“Best Western Goes Green”





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Best Western for a Greener World



Our Commitment

As an organization, Best Western International is committed to providing member hotels with the resources, tools and education needed to develop green initiatives that will sustain resources, save money, and prevent pollution.



Best Western hotels lead the way in going green. [Learn More >](#)



Corporate initiatives make a difference for the environment. [Learn More >](#)



Best Western partners with ENERGY STAR® to improve efficiency and cut utility costs - without sacrificing service, quality, style or comfort.



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Marriott Sustained Excellence



- Earned Energy Star's Sustained Excellence Award for 3rd year in a row
- Over 275 Energy Star hotels

AH&LA's Green Initiative



Home

- ▶ Green Home
- ▶ AH&LA Environmental Guidelines
- ▶ Additional Guidelines
- ▶ AH&LA Green Glossary

"It just takes **10...**"

A 10 percent reduction in energy consumption

- Can be achieved through low-cost measures such as operations and management strategies.
- Would be the equivalent of taking almost one million cars off the road for one year, if achieved across the industry.
- Would have the same financial effect as increasing the average daily room rate (ADR) by \$0.83 in limited-service hotels and by \$2.45 in full-service hotels.

Greening Your Operations

The best way to reduce your organization's carbon footprint is to implement top down initiatives that account for water, waste, and energy efficiency at a structural level. However, this might not always be an option, but there are different avenues you can pursue that will accommodate your budget and goals. Just be sure not to fall into any greenwashing traps - read *Lodging* magazine's article, "[The Real Deal?](#)" for insight.

Environmental Guidelines

AH&LA's Green Task Force is developing a series of comprehensive, sustainable greening guidelines designed expressly to create an environmental-friendly and sustainable hotel. Find out more by [clicking here](#).

Energy Star

Energy consumption is one of the most manageable operating expenses for hotel owners and operators. ENERGY STAR's proven guidelines and resources for cost-effective energy management and climate protection can help you to optimize the operating and financial performance of your property or portfolio of properties. [Click here](#) to learn more about ENERGY STAR programs.

EPA Voluntary Programs

The Environmental Protection Agency (EPA) offers a variety of other programs, like ENERGY STAR, that are free to the public and that can assist hotel owners and operators in achieving "green" goals. Properties looking to define themselves as "green" are encouraged to look to these program offerings as a first step. [Click here](#) for more information about their diverse programs.

Certification Opportunities

AH&LA is working with leading organizations to offer a variety of green certification opportunities that will meet our members' diverse needs for developing an environmentally-friendly and sustainable hotel. We've done extensive research amongst the dozens of certification programs out there and feel confident that of the following programs, you'll find one that's right for your property. Learn more by [clicking here](#).

State programs

Many states offer resources and programs to help local business work towards more eco-friendly practices. [Click here](#) to see if there's a program available in your state.

AH&LA Member Training on ENERGY STAR Benchmarking

May 14th @ 11:30am ET



State and Local Governments Leveraging ENERGY STAR



Policies including disclosure:

- **Washington DC:** Clean and Affordable Energy Act of 2008
- **California:** Assembly Bill (AB) 1103
- **New York City:** *Proposed* Int. No. 476-A (Introduced to City Council on April 22, 2009)
- **Seattle:** *Proposed* Green Building Capital Initiative (Announced April 2009)

Interactive fact sheet at www.energystar.gov/government



Learn about governments leveraging ENERGY STAR in legislation *and* voluntary campaigns.

POLICIES LEVERAGING ENERGY STAR TOOLS		
State/ Municipality	Policy	Summary
Borough of West Chester, PA	Borough Ordinance	This Ordinance requires new commercial construction to be Designed to Earn the ENERGY STAR and benchmarked annually in EPA's Portfolio Manager .
City of Denver, CO	Executive Order 123	Executive Order 123 requires new construction and major renovations of existing and future city-owned and operated buildings to be Designed to Earn the ENERGY STAR and benchmarked in EPA's Portfolio Manager .
District of Columbia	Green Building Act of 2006	The Green "Designed system as annually in
District of Columbia	Clean and Affordable Energy Act of 2008	The Clean eligible private Manager of a publicly a
State of CA	AB 1103, 2007	Assembly B maintain an nonresident Manager . I or operator prospective
State of MI	EO 2005-4, 2005	Executive C establish a Department government benchmark
State of OH	EO 2007-02	Executive C Manager a baselines a

CAMPAIGNS AND INCENTIVE PROGRAMS LEVERAGING ENERGY STAR TOOLS		
State/ Municipality	Policy	Summary
City of Albuquerque, NM	Green Path Program	This program encourages and facilitates the voluntary design and construction of energy-efficient buildings that meet measurable criteria, which includes earning Designed to Earn the ENERGY STAR through EPA's Target Finder .
City of Chicago, IL	Chicago Green Office Challenge	Participants in the Chicago Green Office Challenge will use EPA's Portfolio Manager to track energy and water use and compile results at the end of the contest period.
City of Louisville, KY	Louisville Kilowatt Crackdown	Participants in the Louisville Kilowatt Crackdown will track their building's energy performance using EPA's Portfolio Manager and work to improve performance during the campaign period. The competition is open to owners and managers of all commercial buildings in the city.
City of Portland, OR	BOMA Energy Showdown	Participants in the BOMA Portland Office Energy Showdown will track their building's energy performance using EPA's Portfolio Manager and work to improve performance during the campaign period. The competition is open to owners and managers of commercial offices.
City of San Francisco, CA	Earth Hour 24x7 Energy Challenge	Participants in the San Francisco Earth Hour 24x7 Energy Challenge will track their building's energy performance using EPA's Portfolio Manager and work to improve performance during the campaign period. The competition is open to owners and managers of office buildings, hotels, retail stores, hospitals, medical office buildings, supermarkets, and schools.
City of Seattle and King County, WA	BOMA Kilowatt Crackdown	Participants in the BOMA Seattle/King County Kilowatt Crackdown will track their building's energy performance using EPA's Portfolio Manager and work to improve performance during the campaign period. The competition is open to owners and managers of commercial offices.
State of NM	HB 534: Sustainable Building Tax Credits	To qualify for income tax credits, applicants must demonstrate that the commercial building is 50 percent more efficient than an average building of the same type using EPA's Target Finder .
State of NJ	NJ Pay for Performance Program	Under the Pay for Performance program, commercial building owners are given technical assistance with developing and implementing an Energy Reduction Plan to reduce energy use by 15 percent or more. Participants benchmark energy use in EPA's Portfolio Manager to verify the required 15 percent threshold savings.



Upcoming ENERGY STAR Trainings: Hotel Benchmarking



- May 13, 1:00 PM
- July 15, 12:00 Noon
- September 15, 12:00 Noon
- October 29, 11:00 AM
- December 9, 11:00 AM

All times Eastern

Register at <http://energystar.webex.com>

Updates to ENERGY STAR's Portfolio Manager Tool



- **October 2008**
 - ◆ Greenhouse gas reporting
- **February 2009**
 - ◆ Revisions to the Hotel benchmarking model
- **Spring 2009**
 - ◆ Enhanced reporting capabilities (coming soon!)
- **July 2009**
 - ◆ Additional, optional characteristics for hotels
 - ◆ On-site renewable energy tracking

Questions & Answers



- Rating Update: February 2009
 - ◆ How was the model updated?
 - ◆ How is a rating determined?
 - ◆ Why did you pick those characteristics?
 - ◆ Why do you use CBECS data?
 - ◆ How did my rating change?
 - ◆ Does the model work for my hotel?

How was the model updated?



- Data
 - ◆ Now: Commercial Building Energy Consumption Survey (CBECS) 2003 data
 - ◆ Before: Hospitality Research Group (HRG) 1999 data
 - ◆ Why: More recent data, more operational parameters
- Basis of analysis
 - ◆ Now: Energy per square foot
 - ◆ Before: Total energy
 - ◆ Why: Better assessment of the relationship between energy, size, and number of rooms
- Service levels
 - ◆ Now: based on concrete measures (workers, rooms, refrigerators)
 - ◆ Before: based on categories (economy, midscale, upscale)
 - ◆ Why: concrete measures allow for a superior categorization of service – older categories were ambiguous and subject to confusion

How is a rating determined?



- EPA ratings identify the percentile of performance for a hotel's EUI when normalizing for key operating characteristics in the regression equation
- Two example buildings
 - ◆ Same climate
 - ◆ **Same EUI**
 - ◆ Different operation
 - Large hotel with many rooms and services vs. smaller hotel
 - ◆ **Different ratings**

How is a rating determined?



	Sample Small Hotel	Sample Large Hotel
Square Feet	65,000	750,000
# of Rooms	150	1,000
Presence of Food Preparation	No	Yes
# of Commercial Refrigeration Cases	1	20
# of Workers	15	555
Predicted EUI (kBtu/square foot)	188	248
Actual EUI (kBtu/square foot)	210	210
Rating	31	61

Why did you pick those characteristics?



- Most statistically significant relationships in the CBECS analysis
- Coefficients are **not** just the kWh of the equipment
 - ◆ Coefficient on Commercial Refrigeration is not the kWh draw of the unit – it is the full statistical correlation, which may embody other related characteristics, like restaurants and banquet facilities
- Allow for difference in service level
 - ◆ Spas, conference facilities
 - ◆ Restaurants, bars
- Variables not in model but in Portfolio Manager
 - ◆ Pools and Parking garages
 - ◆ Special engineering allowances

Why do you use CBECS data?



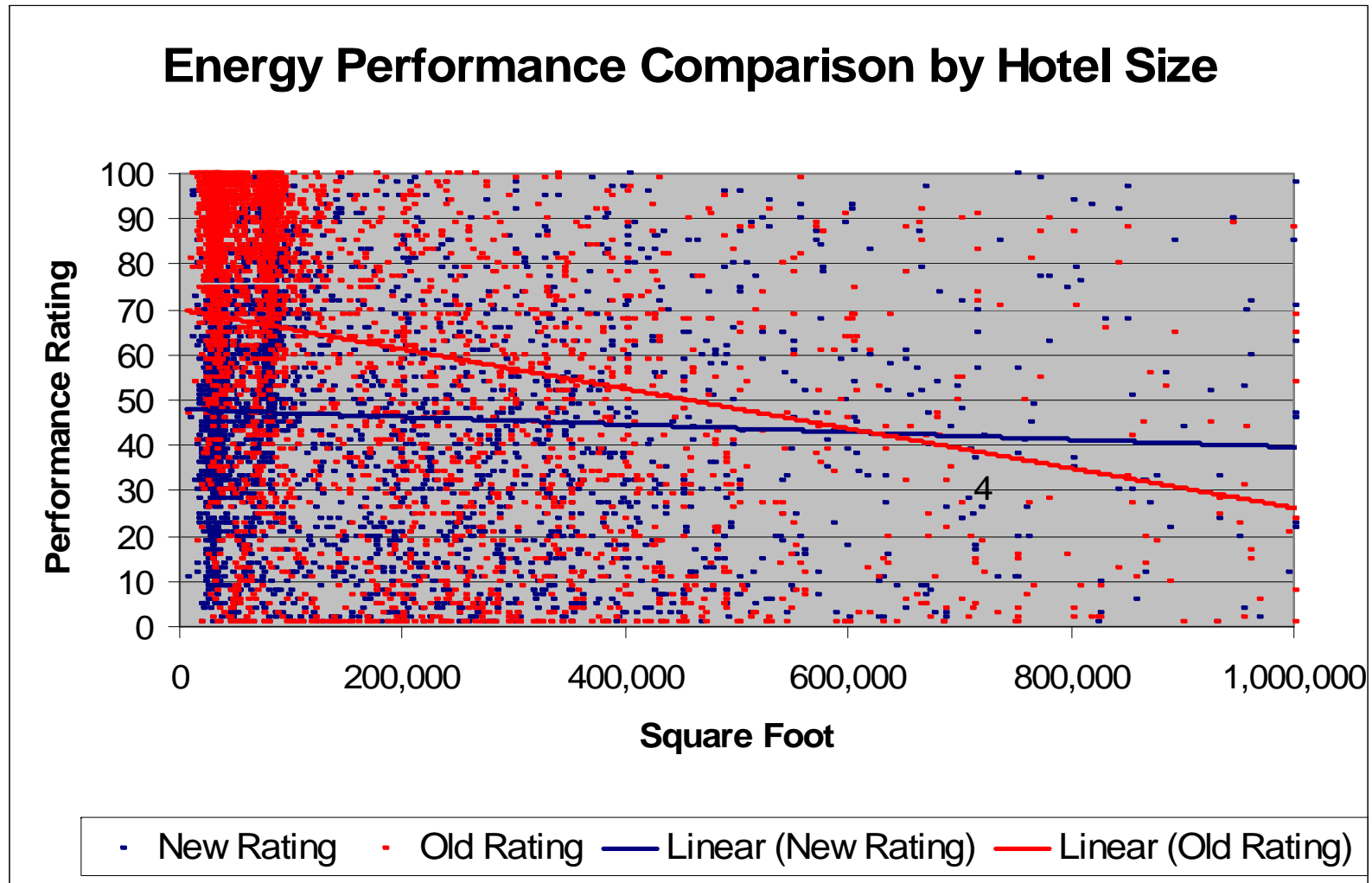
- Random, nationally representative survey
- Contains measured energy consumption data
 - ◆ HRG data has energy cost only
- Specific operational parameters are included
 - ◆ Computers, copiers, refrigerators, workers
 - ◆ Characteristics generally expanded over time
- Data is free and available to the public for analysis
 - ◆ <http://www.eia.doe.gov/emeu/cbecs/contents.html>

How did my rating change?



- On average ratings decreased
- Changes depend on operating characteristics
 - ◆ Larger decreases: small hotels with high room density (e.g. economy hotels)
 - ◆ Smaller decreases/increases: large hotels with low room density (e.g. upscale hotels)
- New distribution of ratings is more equitable than old distribution
 - ◆ Previously many economy hotels with ratings of 80+
- Every partner we looked at had hotels that increased by +10 or more → not all ratings went down

How did my rating change?



Does the model work for my hotel?



- **Yes!**
- EPA observes a broad range of ratings for hotels in Portfolio Manager
- Average ratings are stable across different operational characteristics in both Portfolio Manager and CBECS
 - ◆ Large hotels and small hotels
 - ◆ Cooking and no cooking
 - ◆ Laundry and no laundry
- Energy performance and Energy Intensity
 - ◆ High energy intensity → lower rating
 - ◆ Low energy intensity → higher rating
 - ◆ Middle energy intensity → rating depends on operation

Does the model work for my hotel?



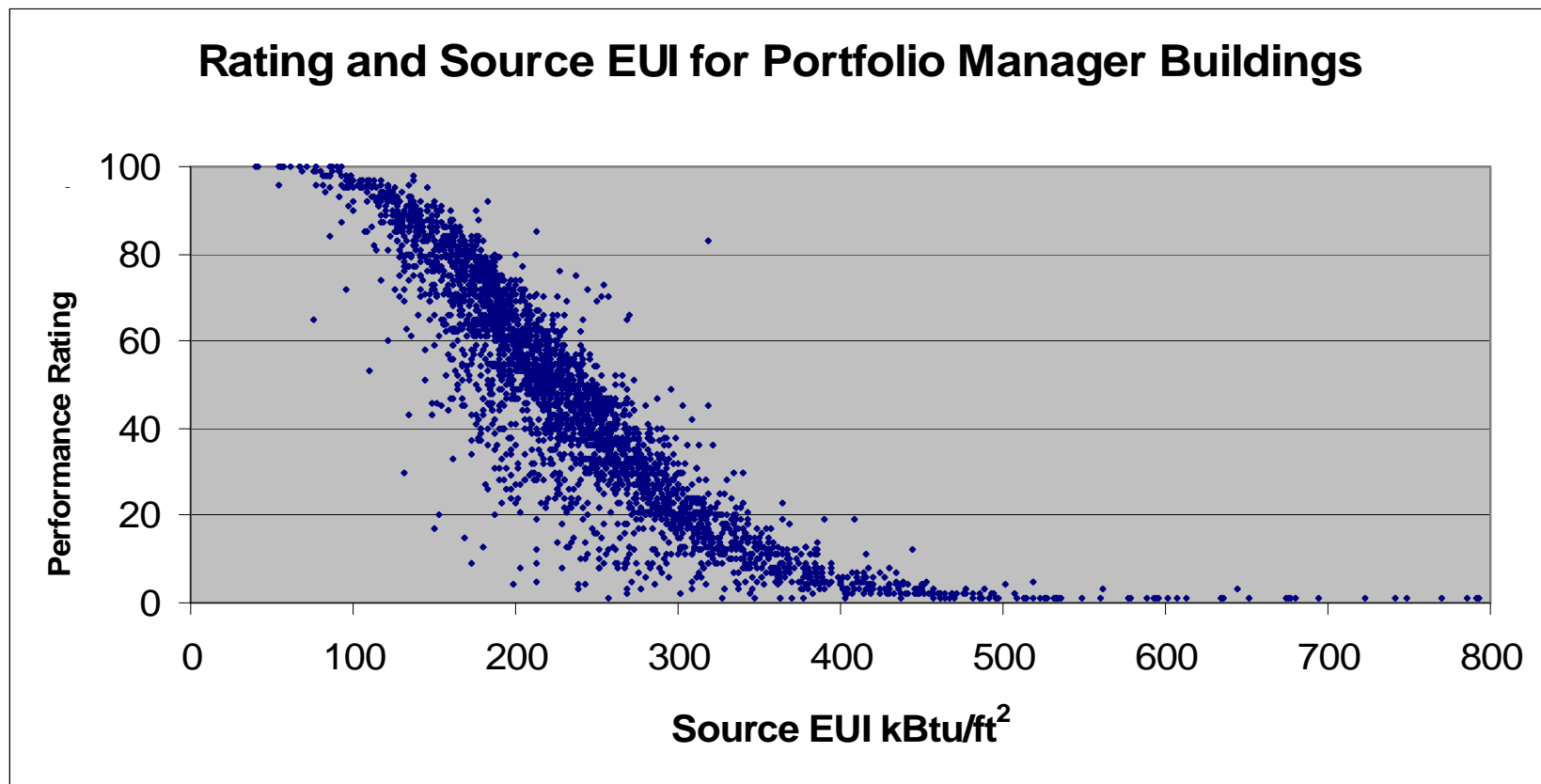
- Average ratings are comparable across different operational characteristics

Average Energy Performance Rating Comparison For Portfolio Manager Buildings		
<i>Size</i>	500,000 or more ft ²	44
	Less than 500000 ft ²	47
<i>Cooking</i>	Yes	47
	No	45
<i>Laundry</i>	Yes	47
	No	46

Does the model work for my hotel?



- Broad range of ratings
- Good relationship between energy and rating





Questions and Discussion